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The Commonwealth of Massachusetts

Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
Western Region
436 Dwight Street, Springfield, Mass. 01103
413-784-1100

PRELIMINARY ASSESSMENT
TITEFLEX
SPRINGFIELD, MASSACHUSETTS

September 28, 1990
CERCLIS MAD000133496

INTRODUCTION

The Massachusetts Department of Environmental Protection (the Department) has completed a Preliminary Assessment (PA) for the Titeflex Corporation (Titeflex) facility in Springfield, Ma., as part of the Multi-State Cooperative Agreement Program (MSCA) between the EPA and the Commonwealth of Massachusetts for the purpose of identifying and screening potential hazardous waste sites pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

This Preliminary Assessment complies with the requirements set forth under CERCLA, as amended. It does not necessarily fulfill the requirements of other EPA or state regulations such as those under the Resource Conservation and Recovery Act (RCRA). The PA is not intended to be a definitive study of the site, and therefore is not suitable for use in planning a site remediation or undertaking enforcement actions against potentially responsible parties. The PA is the first step of the site screening process set forth by the National Contingency Plan (NCP).

PROPERTY DESCRIPTION AND HISTORY

The Titeflex facility is located on 603 Hendee Street in Springfield, MA (see attached figure) and presently produces high pressure hoses. The Titeflex Corporation facility is a division of the T.I. Corporation, the address of which is 50 Culzon St., London, England, W1Y7PN. Titeflex purchased the facility in 1951. The previous owner was the Indian Motorcycle Company, which manufactured motorcycles on-site for many years (Tighe & Bond, 1985).

The Titeflex site contains a large building surrounded by paved and landscaped areas. The property is bounded to the east and south by Route 291. To the west and north

the property is bounded by the Boston & Albany railroad right-of-way. Other manufacturing facilities are located across the railroad right-of-way. A small intermittent stream is located in a wetland swale across Route 291. Access to the site is limited, as the property is surrounded by chain link fences, and is monitored by a security guard (Tighe & Bond, 1985).

High pressure hoses manufactured at the facility include teflon hose, stainless steel tubing, and associated fittings. Teflon hose is produced by mixing teflon powder with a lubricant, and extruding and oven curing the product. Stainless steel tubing is formed from stainless steel stock. Fittings are machined and cleaned in a separate portion of the facility. Approximately 3,000-5,000 gallons of waste oil (coolant, lube and cutting) are generated per year. A vapor degreaser for cleaning fittings formerly generated approximately 1,000 gallons of waste trichloroethylene (TCE) per year. Fittings are also cleaned with hydrochloric acid, hydrofluoric acid, phosphoric acid, sulfuric acid, nitric acid, and sodium hydroxide; acids and caustics are partially neutralized and discharged to the municipal sewer system. A deburring, or "tumbling" room, used to round off edges on fitting parts, generates approximately 300 gallons of sludge per year; this sludge contains a cleanser (Oakite 3) and ceramic powder, and is disposed of at a local landfill. Silver is reclaimed from an X-ray process within the plant. Oil is reclaimed from metal chips produced during manufacturing operations and reused on the facility. Other oil and hazardous materials formerly or presently used or stored on-site include 1,1,1-trichloroethane (TCA), methylene chloride, freon, PCBs (possibly in transformers on-site), water-soluble coolants, mineral spirits, bromoform, potassium ferrocyanide, nickel salt, naptha, #6 and #4 fuel oil, and waste oil. The use of TCE was discontinued at the plant in 1988. Waste solvents, oils and other materials are stored for a period not exceeding 90 days in 55 gallon drums in an area at the north end of the property, removed and reclaimed by Northeast Solvents, Oil Recovery Corporation, Commercial Disposal Company, and Hampden Color & Chemical Company (MA DEP BWSC, 1990).

The facility is classified as a large quantity generator under RCRA. Titeflex notified as a generator of hazardous waste on October 10, 1980. Titeflex does not treat, store for more than 90 days, or dispose of hazardous waste (MA DEP RCRA, 1990). The facility discharges wastewater to the Springfield municipal sewer system in accordance with the requirements of the Bondi's Island wastewater treatment plant (MA DEP WPC, 1990).

The following is a chronological summary of oil and hazardous material releases, inspections, investigations and studies at the site, from MADEP Waste Site Cleanup files (1990):

July 17, 1985 Upon verbal notification by Titeflex, Department personnel investigated a subsurface oil collection system, consisting of an underground storage tank (UST) with french drains, in the "chip shed area" of the plant. The system was designed to collect oil which had historically leached into the ground from dumpsters used to store oil-soaked metal chips, and was reportedly installed in 1970.

October 25, 1985	The Department issued a Notice Of Responsibility (NOR) to Titeflex for the investigation and cleanup of the oil release in the "chip shed" area.
March, 1986	Titeflex's consultant, Tighe & Bond, submitted the results of soil sampling, monitoring well installation and groundwater sampling, in the "chip shed" area; oil & grease contamination was found, no other samples were taken.
July, 1986	Tighe & Bond submitted to the Department the results of addititional well installation and sampling; high levels of volatile organic compounds (VOCs) were found in groundwater samples.
July-August, 1986	Two leaking underground storage tanks (USTs) containing #4 and #6 fuel oil and approximately 600 cubic yards of fuel oil contaminated soil associated with the USTs were removed from the southeast side of the plant.
August 8, 1986	The Department issued an NOR to Titeflex for the investigation and cleanup of the area of the leaking USTs.
September 10, 1987	The Department approved Tighe & Bond's proposal to install and sample additional monitoring wells to define the extent of the VOC plume.
May 18, 1988	Titeflex notified the Department of a cutting oil discharge into a wetlands swale which had been ongoing since 1975.
June 13, 1988	Titeflex submitted results of an investigation of the oil discharge to the wetlands; such discharge was ceased by connecting storm drains to the town sewer.
August, 1988	Tighe & Bond submitted a Phase II Comprehensive Site Assessment to the Department.
June, 1989	Tighe & Bond submitted a revised Phase II report and a Risk Assessment to the Department.
August, 1989	Tighe & Bond submitted to the Department a Phase I Limited Site Investigation for the oil-contaminated wetlands swale. The Department considers this to be a separate site, due to the fact that it is off-site, separate from the VOC plumes, and the contamination is due to a cutting oil discharge.
October 11, 1989	Approximately 300 gallons of heavy naptha (Isopar G) were spilled on the southeast side of the facility in a parking lot and adjoining land.

February, 1989 The Department issued an NOR to Titeflex for the oil discharge to the wetlands swale.

September, 1990 Tighe & Bond submitted to the Department a Scope of Work (SOW) for completion of a revised Risk Assessment under the Massachusetts Contingency Plan; the SOW was approved by the Department.

Site inspections have also been performed on a yearly basis by personnel of the Department's RCRA group (MADEP RCRA files, 1990). The Department has corresponded on numerous occasions with Titeflex and their consultants, Tighe & Bond and Baystate Environmental Consultants, concerning site investigation and remediation, and RCRA requirements.

The results of all investigations to date in and around the facility have delineated the following areas of contamination: soil and groundwater contaminated with cutting oil in the former "chip shed" area; soil contaminated with #4 and #6 fuel oil in the former leaking UST area; sediment and surface water contaminated with cutting oil in the wetlands swale; and two separate plumes of VOC-contaminated groundwater.

Monitoring wells in the "chip shed" area do not presently contain any floating oil. Fuel oil-contaminated soil from the area of the former leaking USTs was removed in 1986 under the supervision of the Department; monitoring wells in this area show no evidence of floating oil on the groundwater.

Titeflex has estimated that approximately 3,500 gallons of cutting oil was released to the wetlands swale through the storm drain system. This discharge was ceased in 1988 at the request of the Department. In June of 1989, Titeflex and Clean Harbors pumped approximately 1,200 gallons of oil from the storm drain system. Five groundwater monitoring wells were installed in the right-of-way for Route 291; soil and groundwater samples showed non-detectable (ND) levels of total petroleum hydrocarbons (TPH). Surface water samples from the small intermittent brook in the swale revealed TPH levels of: 1.1 parts per million (ppm) at the culvert where the storm drain system enters the swale; 0.2 ppm 800 feet downstream from the culvert, and 17 ppm 1600 feet downstream from the culvert. The most visibly impacted sediments in the swale cover an area approximately 8 feet wide, 3 to 4 feet deep, and 40 feet long, extending from the culvert outlet. Sediment samples from this area contained up to 38,000 ppm TPH at a depth of 0 to 6 inches, and ND levels of TPH at a depth of 4.5 feet (MA DEP BWSC, 1990). No other analyses besides TPH were performed on these samples.

On the facility, Titeflex has installed a total of 15 shallow (water table) monitoring wells and 8 deep (40' total depth, with 5' long screens) monitoring wells. These wells have outlined the two dissolved VOC plumes mentioned above. The western plume extends westward outside the facility boundary, is approximately 100 feet in length and contains up to 142,000 parts-per-billion (ppb) TCE in shallow wells, and up to 12,300 ppb TCE in deep wells. The southern plume extends southward from the facility within Titeflex property, is approximately 300 feet in length, and contains up to 12,470

ppb TCE in shallow wells, and up to 130 ppb TCE in a deep well (Tighe & Bond, 1989). The sources of both plumes are suspected to be former bulk handling locations for TCE.

Surficial geologic materials at the site consist of glacial sand and gravel to a depth of 41 to 47 feet, underlain by sandy and clayey silts, in turn underlain by glacial till and bedrock. The silt/till layer is believed to limit the downward migration of TCE. Groundwater velocity at the site is estimated to be 20 feet/year, and groundwater flow is generally towards the west. Tighe & Bond reports that the nearest possible surface water discharge point for groundwater is Abbey Brook, more than one mile downgradient, however, the intermittent brook in the wetlands swale is less than one quarter of a mile southeast of the plant (Tighe & Bond, 1988).

WATER USE

There are no known community or non-community water supply wells within a four mile radius of the site. The city of Springfield obtains its drinking water from the Cobble Mountain Reservoir, located approximately fifteen miles upgradient and west of the site. There are no known surface water supplies within fifteen miles downstream of the site (MA DEP DWS, 1990). There are no state designated critical habitats found within one mile of the site (Massachusetts Department of Fish and Wildlife, 1987).

CONCLUSIONS

Cutting oil was historically released to the ground in the "chip shed" area and to a wetlands swale, which has resulted in significant contamination of soil, sediments, groundwater, and surface water. The discharge of oil to these areas was ceased in 1986 and 1987. Two separate plumes of dissolved VOC contamination are present in groundwater on-site. Groundwater samples from the western plume have contained up to 142,000 ppb TCE at the water table and up to 12,300 ppb TCE at a depth of 40 feet. Groundwater samples from the southern plume have contained up to 12,470 ppb TCE at the water table and up to 130 ppb TCE at a depth of 40 feet. Titeflex discontinued the use of TCE at the plant in 1988. Field work for the Phase II Comprehensive Site Assessment of the Massachusetts Contingency Plan (MCP) 310 CMR 40 has been completed, and a Site Risk Characterization pursuant to the MCP is being revised to to the Department's satisfaction. The Department recommends that a screening site inspection of medium priority be conducted.

Submitted by,

Larry Hanson

Larry Hanson, Environmental Analyst
MA DEP, Bureau of Waste Site Cleanup

REFERENCES

MA Department of Fish and Wildlife, 1987. Estimated habitat map of State Listed Rare Wildlife Species that occur in wetlands. Prepared by National Heritage and Endangered Species Program. October.

MA DEP Division of Water Supply (DWS), 1990, Memo to Waste Site Cleanup concerning file search for water supplies, September.

MA DEP RCRA, 1990, File containing various letters and memos.

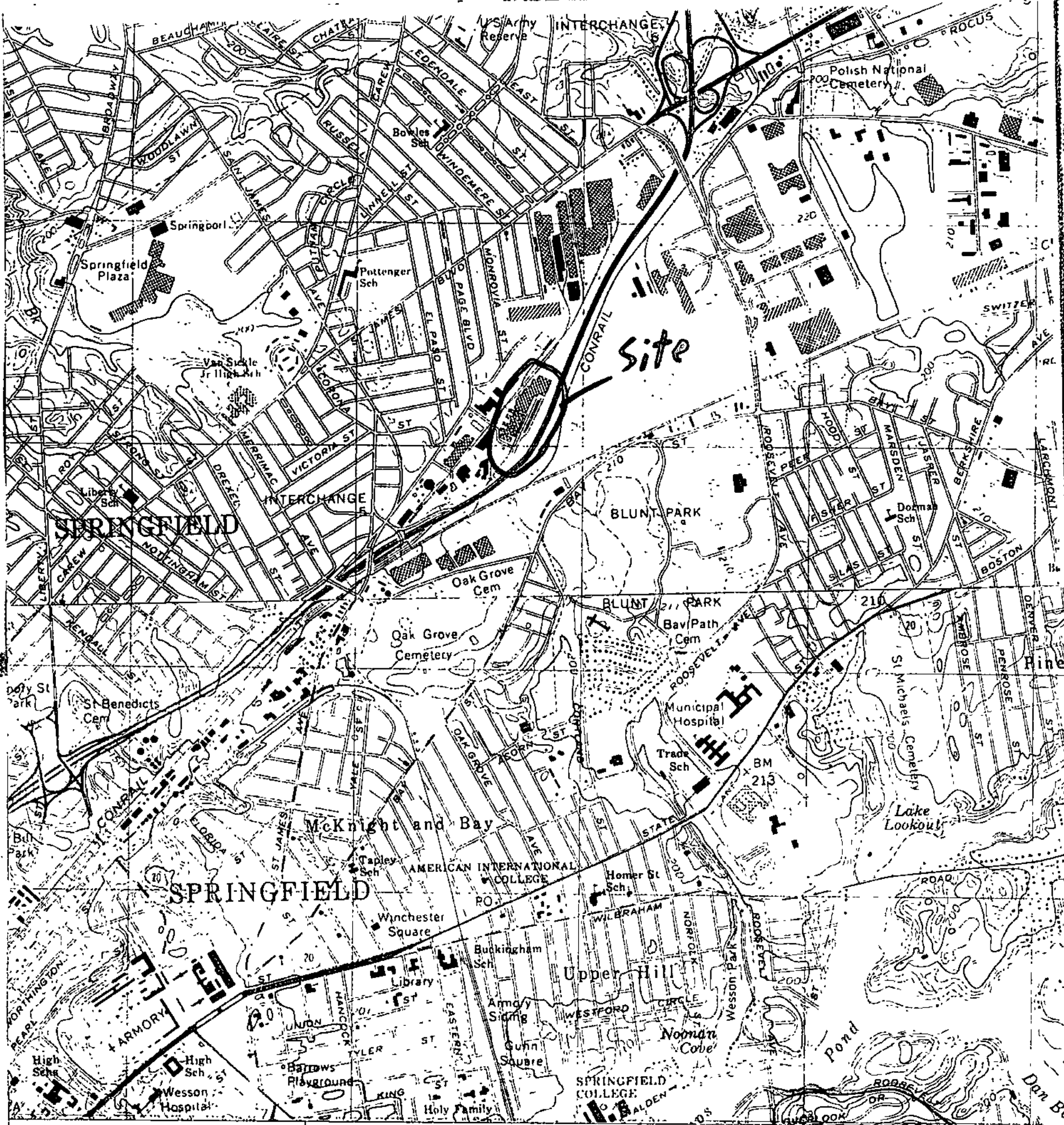
MA DEP Bureau of Waste Site Cleanup (BWSC), 1990, File containing various letters and memos.

MA DEP Water Pollution Control (WPC), 1990, File containing sewer permits.

Tighe & Bond, 1985, Groundwater Quality and Soil Sediment Assessment Program at Titeflex, November.

Tighe & Bond, Inc., 1988, Phase II Remedial Investigation (Preliminary), August.

Tighe & Bond Inc, 1989, Phase II Site Assessment Report, June.



SCALE 1:25 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

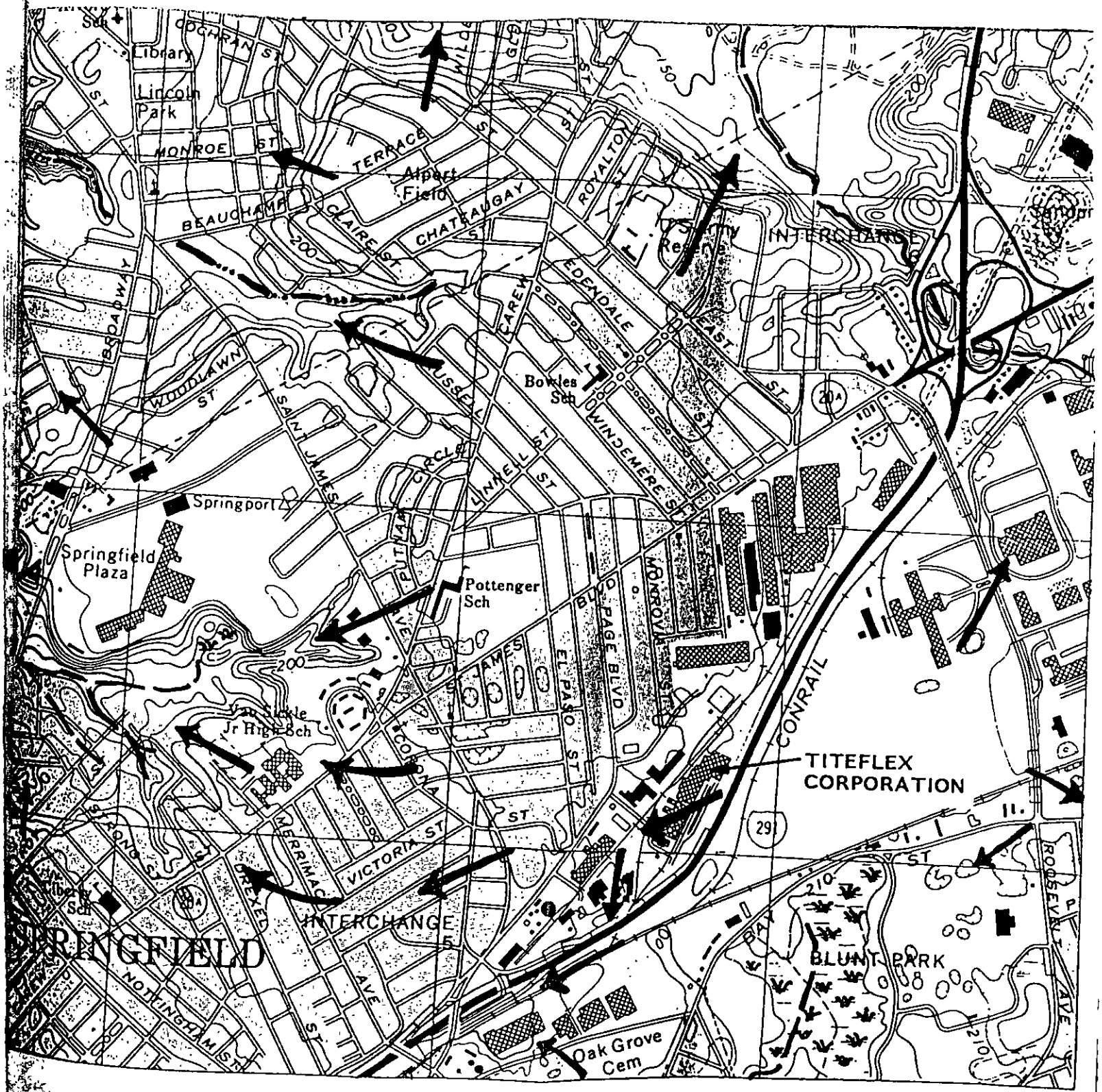
CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

MASS

QUADRANGLE LOCATION

FIGURE 1
SITE LOCATION AND REGIONAL GROUNDWATER FLOW MAP



TITEFLEX CORPORATION
SPRINGFIELD, MASS.

TIGHE & BOND, INC. CONSULTING ENGINEERS
Easthampton, Mass.

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION
01 STATE: MA | 02 SITE NUMBER: D000133496

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Titeflex Corp.	603 Hendee St.				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Springfield, MA	MA	01103	Hampden	013	
09 COORDINATES LATITUDE: 72° 33' 40.-"	LONGITUDE: 42° 8' 0.-"				

10 DIRECTIONS TO SITE (Starting from nearest public road)
From Page Blvd, go to end of Hendee St.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)		
T.I. Corp.	50 Culzon St		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
London, England		W1Y7PN	(071) 499-9131
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)		
Titeflex Corp	603 Hendee St		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Springfield, MA	MA	01103	(413) 739-5631

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☒ A. RCRA 3001 DATE RECEIVED: 10, 10, 80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE: 7, 17, 85 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION: 1951 (BEGINNING YEAR) | 19: Present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Trichloroethylene, waste oil, 1,1,1-trichloroethane, methylene chloride, freon, mineral spirits, bromoform, potassium ferrocyanide nickel salt, hydrochloric acid, hydrofluoric acid, phosphoric acid, sulfuric acid, nitric acid, sodium hydroxide

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
VOC plumes in groundwater may pose possible inhalation risk; waste oil in wetlands swale may pose environmental, ingestion or dermal contact risk.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency, Organization)		03 TELEPHONE NUMBER
Larry Hanson	MA DEP, BWSC, Springfield, MA		(413) 784-1100
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Larry Hanson	MA DEP	Waste Site Cleanup	(413) 784-1100	9, 28, 90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

Site Name: Tide flex
CERCLIS No.: MAD 000133496
TDD No.:
Reference No.:

NPL ELIGIBILITY CHECKLIST

	YES	NO	COMMENTS
Are the wastes onsite considered hazardous as defined in CERCLA?	√		
*Sites covered by other authorities:			
Are the hazardous materials at the site solely petroleum products (gasoline, oil, natural gas)?		√	
Is the contamination at the site caused solely by pesticides that were applied using an accepted practice?		√	
If the release is into public or private drinking water systems, is it due to deterioration of the system through ordinary use?			Not applic.
Is the release from products which are part of the structure, and results in exposure within residential, business, or community structures?		√	
Did the release result in exposure to people solely within a work place?		√	
Does the facility have an Underground Injection Control permit under the Safe Drinking Water Act?		√	
Is the release the result of the normal application of fertilizer?		√	
Does the release involve naturally occurring substances in their unaltered form?		√	
Does the contamination at the site consist solely of radioactive materials generated by Department of Energy/Atomic Energy Commission activities?		√	
Is the contamination at the site caused solely by coal mining operations?		√	
Does the facility have a permit from the EPA or the US Army Corps of Engineers (under the Marine Protection, Research, and Sanctuaries Act) to dispose of dredged materials in ocean waters?		√	

Site Name:
CERCLIS No.:
TDD No.:
Reference No.:

	YES	NO	COMMENTS
***Other issues to site definition:**			
Is the site defined solely as a contaminated well field?		✓	
Is the site currently owned or operated by a federal agency, or has it been in the past?		✓	
Is the site a municipal landfill?		✓	
-- Check if there is documentation of disposal of industrial waste.			
Does the waste consist of a "special waste" such as fly ash?		✓	
-- Check if there is documentation of a hazardous component to the waste.			
Does the facility have an NPDES permit?		✓	
-- Check if the facility has a history of permit violations.			
Is the facility subject to ambient air quality standards under the Clean Air Act?	✓		
Does the facility have a permit under the Clean Air Act?		✓	
***RCRA Status**			
Has the facility notified as a RCRA generator?	✓		
-- The facility is a large quantity generator.	✓		
-- The facility is a small quantity generator.			
Has the facility ever had RCRA interim status or a RCRA permit?		✓	
If yes, check any that apply:			
-- The facility is a "non-notifier" or "protective filer" (identified as such by EPA or the state).			

***RCRA Status (continued)**

-- The owner of the facility is bankrupt, or the owner has filed for protection under bankruptcy laws (if known). ___

-- A RCRA compliance order or notice of violation has been issued for the facility at some time. ___

The order or notice concerned:

- conditions that posed a hazard (i.e., a release of contamination to the environment) OR ___

- administrative violations (i.e., record-keeping or financial requirements). ___

-- Some RCRA enforcement action is currently pending at the facility. ___

-- A RCRA permit has been denied or interim status has been revoked for the facility. ___

The permit or interim status was revoked:

- because of conditions at the facility that posed a hazard OR ___

- because the facility failed to meet an administrative requirement (i.e., failed to file an acceptable Part B permit application). ___

-- A closure plan has been requested or submitted for the facility under RCRA. ___

-- A closure plan has been requested or submitted for the facility under RCRA. ___

-- A closure plan has been approved for the facility under RCRA. ___

-- The facility is closed and currently monitoring under RCRA regulations. ___

CERCLIS DATABASE FORM

DATE: 9/28/90

SITE NAME: Titeflex Corp
CERCLIS No. MAD000133496
TDD No.
PROJECT MANAGER: Larry Hanson

DIRECTIONS TO SITE: From Page Blvd, so to end of Hendee St.

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY
1. FOR ALL PROJECTS			
State	C2(2)	Postal code	MA
Site ID (If available)	C101(12)	Dun & Bradstreet or GSA	
Site Name	C104(40)		Titeflex Corp.
Street Address	C110(25)		603 Hendee St.
City	C111(25)		Springfield
County	*TBD		Hampden
Ownership	C136(2)		

FF = Federally owned
ST = State owned
CO = County owned
DI = District owned
IL = Indian lands
MI = Mixed ownership
UN = Unknown
*TBD1 = Municipally owned
*TBD2 = (Privately owned)
OH = Other

Years of operation	*TBD	1951 to Present	39
FMS Number (if assigned)	C315(4)		
Coordinates	*TBD	Latitude	72° 33' 40"
		Longitude	42° 8' 0"

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY
Recommendation of Most Recent Project at Site	C2103(1)	For PAs: H = High = SSI Required M = Med. = SSI Recommended N = NFRAP = No Further Remedial Action Planned For SSIs: R = Recommended for an LSI D = Deferred to another authority N = NFRAP = No Further Remedial Action Planned For LSIs: G = Recommended for an HRS Scoring N = NFRAP = No Further Remedial Action Planned	M
Note	C2105(20)	Abbreviated Comments	
Reasons for Ineligibility (for Sites Determined Ineligible under CERCLA)	*TBD	*TBD1 = Petroleum contamination only *TBD2 = Active RCRA facility *TBD3 = Properly applied pesticide *TBD4 = Nuclear/radioactive waste *TBD5 = All other reasons	
Agency Responsible for Work at Site	C2117(2)	F = EPA, Fund financed S = State, Fund financed SN = State, no Fund financing FF = Federal facility *TBD = Responsible Party	TBD

ELEMENT	CERCLIS CODE (No. of positions)	DESCRIPTION	ENTRY

II. ONLY FOR SITE WITH HRS

Type of Facility of Source	C137(1)	B	=	Chemical Plant
		C	=	City Contamination
		L	=	Landfill
		M	=	Manufacturing Plant
		N	=	Military Facility
		F	=	Other Federal Facility
		T	=	mines/tailings
		P	=	Lagoons
		A	=	Abandoned/Midnight dumping
If unknown, Type of Waste Present		R	=	Radioactive Waste
		J	=	Inorganic Waste
		*TBD	=	Organic Waste
		I	=	Other Industrial Waste
		D	=	Dioxin
If unknown, Type of Receptor Affected		V	=	Waterways/river
		H	=	Housing Area
		W	=	Drinking Water Wells
		*TBD	=	Ecological Receptors
		O	=	Other _____

Abstract C201(240) Site Description

_____

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